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RENDERING

IN

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ARCHITECTURAL RENDERING IN SEPIA

BY FRANK FORREST FREDERICK
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WILLIAM T COMSTOCK
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ARCHITECTURAL

RENDERING IN SEPIA

By FRANK FORREST FREDERICK

Professor of Industrial Art and Design, University of Illinois.

New York

WILLIAM T. COMSTOCK

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INTRODUCTION.

THE architect must be master of delineation, chiaroscuro and color, if he would make a perfect representation of the scene before him, or picture the fancy of his imagination.

The architect should be an artist.

It is the purpose of these notes to point out to the student of architecture some facts of chiaroscuro, and to tell him how these facts may be rendered in washes of water color (sepia), that he may make the representation of a building.

The two methods of rendering perspectives—by ink lines drawn with the pen and by washes of water color—cannot be compared. The means employed are totally unlike, and the results obtained almost as unlike.

Pen inferior to brush.

The lack of truthfulness and the meagre power of expression in the pen-rendered perspectives led to the formation, in the School of Art and Design of the University of Illinois, of a class in Sepia Rendering, made up of students of architecture.

These notes contain virtually the same matter as is there given in class lectures, and the exercises here reproduced show the manner in which the work is taken up.

In University of Illinois.

To prove that this method of rendering is successful we have but to look at Plates III., IV., V., VI., VII., VIII., IX., X. and XIII., all of which were rendered by students who devoted one term, or twelve weeks of nine hours each, to this class of work. Plate III. is the work of Ernest N. Braucher; Plate IV., of Charles B. Young; Plate V., Ransford M. French; Plate VI., Herbert E. Hewitt; Plate VII.,

Work of Students.

Frederic W. Clarke; Plate VIII., Ernest N. Braucher; Plate IX., Lawrence Fischer; Plate X., Walter F. Shattuck; Plate XIII., Frederic W. Clarke; and to these gentlemen I extend my thanks for the use of their drawings, and wish them unqualified success in their profession as architects.

The plates not to be copied.

It is not expected that the student will use these plates as copies, but rather as suggestions for his own work. As these drawings are reduced from the original size, it will be impossible to get the same effect even if drawn to original scale. The exercises should be followed, and the drawings here given used as copies for method and effect only.

Student must understand perspective.

It is supposed that the student taking up this work already understands perspective, and is able to make an accurate drawing—a copy of a building, or a perspective from plans and elevations of a building not yet erected. It is also supposed that he does not possess a great amount of artistic ability, but is willing, by hard study and the acceptance of many defeats, to work through a series of exercises, which, if he works conscientiously, will enable him to make a true and graphic picture.

Aim of exercises.

The end and aim of this course in Sepia Rendering is to prepare the student for working directly from nature, or for rendering ideal effects of light and shade upon his own perspectives.

Plate I

F. F. Frederick

I.

CHIAROSCURO.

IN a perspective rendered in sepia (or any other monochrome), everything except color—form, character, relation to surroundings and position in space—can be expressed by means of values of shade. By *value* meaning the intensity of light and shade as compared with other parts of the object, or accessories. And color can be suggested by giving a value for it. Value.

The real color of objects is called their "local color"; this local color is much affected by light and shade, and increases the difficulty of the architect's problem. It will be seen that the shade on a white house cannot be like that on a red one; and if a house is white it must be so handled as to suggest white; if red, red. To express this, different scales of shade have to be adopted when several buildings, unlike in color, are rendered in the same drawing, in order that the local color of each may be expressed. Local color. Scales of value.

In an art school, the student is placed in a studio where a steady light falls upon a cast or group of objects. It is then pointed out to him that the object, intersecting the light, has one side in light, the other in shade, that a shadow is cast, and to truthfully represent this is the student's problem.

This is precisely the problem before the architect. He has a building to represent; the sun shines and illumines a part of it, another part is in shade, and a shadow is cast. The The architect's problem.

position of the sun must be at once evident; the building must appear solid, and must cast a shadow. It must be enveloped in atmosphere, and take its place in the picture near or far, as the case may be. It must hold proper relation with the sky, the trees, and the buildings about it. The values of all things in the picture must express not only solidity, but color, and give an effect of reality.

A solid building surrounded by atmosphere.

A water color drawing is not the rival of a photograph; it should accentuate the essential and characteristic features, subordinate detail, and, by masses of light and shade, give the effect of repose without which there is no resemblance to nature.

Repose demanded.

The architect must learn to generalize and to express much in a simple way; he must learn what to leave out, as well as what to put in, to suggest without fully stating; in fact, he must not try to draw every moulding, every pane of glass, every joint between the bricks, every leaf on the tree; he must not see reflected lights that cut the shades, giving variety where simplicity is needed; but he must suggest all these by rendering his building in simple flat washes, with detail judiciously introduced where a little will suggest much. He must learn to sacrifice little things that the great may be expressed.

Omit non-essentials.

The student of chiaroscuro must learn to look at things simply—there is a mass of light and a mass of shade. These various "planes of shade" have a certain shape as well as value. Look at the building as made up of these planes or values, not as a collection of walls, towers and windows; and when working consider them as parts of one whole, never increasing the value of one part without due regard to all other parts. Remember that the shape of a cast shadow depends upon the shape of the object casting it, and the surface over which it falls; and that shadows are darker and more distinct near the objects that cast them. And,

Look at things simply.

Shape of cast shadows.

finally, strive for "breadth," which is obtained by means of intermediate shade, not by abrupt contrasts. Breadth.

The facts of chiaroscuro are the same whether one color is used or many. The method of handling to be described applies equally well to color rendering, but the student should not attempt color until he is quite skillful in the use of monochrome. Color.

An architect has no more right to give his client wrong impressions of color than he has of form or cost. Be truthful.

A color effect, quite true to nature, can be obtained by going over the sepia drawing when completed with flat washes of color. When this is done, light surfaces should be given very slight values of sepia, as the color has a tendency to increase value as well as give color. Color over sepia.

II.

COMPOSITION.

"In all good compositions you will find three most important qualities—simplicity, breadth and character—and these are gained, not by rules, but by feeling for good drawing and color."—*Sir Joshua Reynolds.*

FOR the last word in this quotation read "value," and it will be equally true.

All artists, in their work, consider three things—the quality and position of lines, the size, shape and position of areas of dark and light, and the color.

Composition defined.

The arrangement of these lines and areas to express an idea is composition.

The problems in composition are as numerous as the number of drawings. No rules can be given, and but few suggestions made. Every architect who makes perspectives of his buildings is advised to observe buildings already erected from different positions and under different conditions of light; and, by so doing, he will absorb a feeling for form and for light and shade to be gained in no other way.

Study nature.

Care should be taken, in laying out a perspective, to have the most interesting and prominent features of the building near the centre of the drawing.

Beware of confusion.

Choose such a position that the building will compose simply without confusion of members; and, where several are to be in the same composition, simplify the drawing of those in the distance into masses of value, for a confused composition can never invite the attention. Whatever is

done be truthful; the building in the picture must have the same scheme of light and shade that it will have in nature; that is, the shadows must be cast in the same direction that they will be cast by the sun, even if we have to sacrifice something of interest in the drawing.

The part of composition that particularly concerns the student of Architectural Rendering in Sepia is the treatment of light and shade.

Light and shade.

It is the province of light and shade to give solidity and an effect of reality to the drawing; to bring out, by the various values, the proportion of the building; and by its shadows of cornice, gable and projection add interest and beauty. It is also the province of light and shade to counteract any disagreeable tendency of line, and to set forth the beauties of the building in every legitimate way.

It is a mistake to make much of the accessories.

Simplify accessories.

The architect is not a painter of scenery, and he is lessening the effect of his work by burying it in imaginary foliage, or surrounding it by Arcadian landscape, which outweighs in interest the building itself. He should add truthful, agreeable and proper surroundings suggesting the location, and these should be treated as a foil to enhance the beauty and add to the interest of his building.

The sky.

A good atmospheric effect can be obtained by making the sky grade to light near the horizon, and, if masses of foliage flank the building, make them lighter than the building on the shade side and darker on the light.

Horizontal clouds growing nearer together as they approach the horizon give an effect of distance; a sky so treated as to be dark at the horizon and grade upward will give an effect of height to the building.

Contrast of sky and building.

If the building is simple and expressed in large masses it is well to give variety to the sky by cloud forms; if it is complex and cuts the sky by many chimneys, towers, etc.,

the sky should be simple. Where little sky is seen, it should be expressed by a flat wash.

To prevent a heavy and mechanical effect, equal quantities of light and shade should be avoided.

Generally it will be found better to have more space about the light than the shade side.

Beware of long continued lines, as a cornice; break them by a play of light and shade.

III.

HANDLING.

FIRST strain the paper, though if the accessories introduce distant hills, masses of foliage, etc., it will be well to first draw the general outline of the building and wash in the distance while the paper is moist. The sky can be put in when the paper is in this state without fear of hard edges, and, when the paper is dry, complete the drawing.

Study the subject while the paper dries.

"Modern Dutch" methods cannot be successfully employed in architectural rendering.

The student should make a very careful drawing. Wherever there is width or thickness, lines should be drawn to express it. Such small lines as the joints between bricks, stones or slates should not be drawn in pencil.

The student will find it much easier to cover some unnecessary lines when laying washes, than to determine the shape and area of washes without lines to aid him. As he gains command over his materials, he will depend more and more upon his brush, until, when rendering simple buildings, the principal long vanishing lines and a few verticals to give widths will be all that he will require; the drawing will be made largely with the brush.

The drawing.

Draw with brush.

Exercise great care in selecting the pencil. Lines drawn upon water-color paper must have strength enough to be seen clearly even through light washes, but must not soil the paper or wash about under the brush. The pencil must

The pencil.

not be hard enough to cut channels in the paper, as these will fill with color and leave lines.

Experience alone will show the proper grade of pencil to use. Erase as little as possible on water-color paper, and that with a soft eraser, that the texture of the paper may not be destroyed.

In the finished drawing no lines whatever should be seen. We see buildings as masses of value relieved against each other by their value, not by their outline. We realize that one wall is nearer than another because it appears lighter or darker; there is no line where these values meet, therefore we express these surfaces by laying washes of proper value side by side, and not by drawing lines where these values meet.

No outlines in nature.

The drawing completed, pass over the paper with a large brush or soft sponge, wetting the entire surface, and at once take up the superfluous water with blotting paper or a soft cloth. If a large surface is to be covered, it is well to leave the damp cloth on the lower part of the sheet, that the paper may not dry before it is reached.

Wet the paper

To lay a flat wash, incline the board slightly and, while the paper is yet damp, with brush full of color pass along the upper edge of the space to be covered, whether large or small, forming a pool or wave of color. Keeping the brush full and holding it at right angles to the paper, coax this wave to flow slowly down the paper, keeping it moving evenly and allowing no part to stand longer than another.

A flat wash

On no account "drag" the color or try to "paint it on," but let it settle on the paper as the wave passes over it. When the lower edge of the space is reached, take up the superfluous color with blotting paper or dry brush. Never paint "up hill."

The student is advised to mix his pigment in a cup, or other receptacle larger than the compartments in the cover

of the water-color box. It is better to throw away a little sepia than to spoil a drawing.

Blotting paper cut into rectangles about 1½″x3″ will be found the most convenient size. Blotting paper.

Strive to have the values transparent. Get the value right by trying it on a paper aside, remembering it will dry lighter than it seems when wet; put it on and let it stay, never touch into a value when wet; get the edges right as the area is covered. Do not pass hurriedly over corners and slightly projecting mouldings, in the hope that they can be corrected later. The ruinous condition suggested by angles so handled will increase with each succeeding wash. Keep a transparent effect.

Always keep the brush full of color; beware of the "cut and dried" appearance resulting from lack of water in the washes; get dark accents, not by dragging on thick color, but by wet touches of dark value allowed to dry out. (See handling of upper part of tower, Plate IV.) Keep the brush full of color.

Do not be afraid of losing the drawing. If the roof and sky look the same value, make them so; they can be distinguished later. Study to cover as much area with each wash as possible; this saves time and gives a feeling of unity by binding together the several parts of the drawing.

Do not try to make the water-color resemble a photograph, a lithograph, a pen and ink drawing, or an oil painting. It has a character of its own—keep it. A sepia drawing has a character of its own.

The student is advised to lay several values of various sizes and intensity before taking up the work of the Exercises.

In rendering Plate I., the first thing to decide was the position of the sun. This was taken as it appears in the early morning, that the simplest side of the building might be in shade, that the vertical shadows on the front might have a width to properly express the projections, and that the interesting shadows across the roof might be seen. It is much easier to render a surface cut up by projections when it is in light than when in shade. Principles illustrated.

Plate I.

In Plate I. the roof was given a medium value, except where it was thought the light would be reflected most directly to the eye ; here it was left light, as the gable on the shade side, and the pyramidal roof over the centre, which was left quite light in order to give contrast to the shade and shadow of the gable in front. The apex itself is given relief by being opposed to the cloud form behind it. These

Lead the eye into the picture.

clouds were put in in their present direction to counteract the influence of the long lines of the building, which slant down to the left and have a tendency to lead the eye of the spectator out of the picture.

Long horizontal and all lines which lead the eye from the centre of interest must be avoided, and values which detract from the point of greatest contrast must also be avoided. This point of greatest contrast of value is usually the near-

Greatest contrast of value.

est corner of the building. (See Plate I.) This corner, which should be near the centre of the drawing, should be lightest and brightest ; and all values should increase as they go away from this point on the light side and decrease on the dark side, that a uniformity of value may be obtained

Aerial perspective.

for the distance, thus fulfilling the demands of aerial perspective, which requires a blurring of outline and subduing of contrast to give an atmospheric effect.

About the centre of interest, draw mentally a circle or an ellipse, as the shape of the composition may suggest (as is

Keep the corners light.

sketched on Plate XI., Fig. 2), and let the values without this be comparatively light. By keeping the pronounced contrasts out of the corners we force the eye where we wish it—to the centre of interest.

The point of greatest contrast must not be taken to mean the contrast of the dark spots in windows or doors, for these, while useful as accents, are in no sense necessary to the light and shade effect, as will be shown later.

Other matters of composition will be considered in the Exercises.

IV.

MATERIALS.

THE best materials are the cheapest. Whatman's medium weight water-color paper is the best for general use. A picturesque subject, handled by one accustomed to the work, can be well rendered on the very rough paper. Small sketches and simple buildings are well rendered on any drawing paper that does not have a calendered surface. The paper.

The brush for work of this description should be large and of good quality, red sable or camel's hair. When dry it should be about an inch long and one-fourth inch in diameter. When wet it should come to a perfect point and be elastic enough to spring back into shape after having been pressed against the paper. A brush without elasticity cannot be used; the point of a brush may be improved by being carefully washed after use and then drawn through the lips. The saliva will hold the hairs in place and quickly dissolve when the brush is again wet. The brush.

For pigment use Winsor & Newton's make. Pigments.

Payne's gray, neutral tint, brown madder, burnt sienna, India ink and cold sepia are often used, but warm sepia is the general favorite.

A little carmine mixed with India ink gives a photograph tint.

V.

EXERCISES.

EXERCISE I.

FOR PRACTICE IN TRANSLATING THE VALUES OF A PHOTOGRAPH INTO VALUES OF SEPIA.

Select simple subjects.

SELECT a photograph of some simple building, one that has large uninterrupted masses of light and shade, and with little in the way of foliage or of other buildings about it—as Plate II.

If the subject is too complex, it will be difficult to appreciate the values of shade, and the difficulty of handling the washes of color will take more time than is worth giving the first exercise.

If a photograph is not at hand, take a reproduction from one of the architectural magazines. The tendency in all reproductive processes is toward uniformity in value, and even a photograph is not a perfect guide. Many quite clear photographs, if rendered in sepia with the same contrast of light and shade, would be flat and uninteresting, lacking the sparkle of sunlight. It is often necessary to make near light surfaces lighter than they appear, to leave out reflected lights, and to make dark areas in the distance much lighter.

Force the lights.

The student, of course, will not endeavor to represent all the minutiæ of the photograph, but will simply strive to render the spirit of his subject in the medium at hand.

Plate II

The size of the drawing will depend upon the subject. Most of the plates (notice original sizes) were drawn from 7x9″ reproductions of photographs. Size of drawing.

Make the drawing as already directed, and study the subject carefully, keeping in mind that the whole thing is to be represented by a few flat washes; each wash covering less space than its predecessor, until from covering the whole paper it will have decreased to the size of the smallest dark touch required to give accent to some small detail. All expressed by flat washes.

Observe the direction of the light; the position, area and intensity of the shades and shadows; the position of the darkest spot on the building and the lightest; the relative value of the roof compared with the light and dark walls. Study the subject.

Think what motion the hand will take to cover irregular areas; decide upon the best position to hold the board (it is easier to carry a wash from an angle to a straight line than *vice versa*).

Decide how many different values will be required to express certain parts, and settle upon the shapes of these values, remembering that it is always advisable to cover all surfaces that are of about the same value at the same time.

Study everything relating to the problem with the utmost care; plan it out, for later, with brush in hand and washes of color drying, there will be little time for thought.

Compare your problem with the drawings here reproduced, and see if schemes of light and shade there carried out can be applied to the problem in hand.

Having studied his subject, the student is ready to proceed with the rendering, but before doing so he is advised to read the notes relating to all the exercises. Read the notes.

The method is as follows:

First.—Wet the paper as directed.

Second.—Lay over the entire paper a very light wash—lighter than is seen in plate II.—leaving the white paper to

High lights.

represent white clouds and the highest lights upon the building, whether shown on the photograph or not, in order to get a proper effect of sunlight; but such white places should be used sparingly, and only on the nearest exposed corners, or mouldings, or in windows, and never on the shade sides or in the distance.

It will be noticed that the highest lights and brightest surfaces are generally directly opposed to the darkest surfaces.

This light wash should go over the entire paper to cover all white not wanted for high lights, and to give a surface upon which darker values can be easily washed. All values of sky, ground, etc., should be carried farther from the building than wanted, that the completed drawing, when cut out, may appear finished at the edges.

It will be well for the student to carefully study the plates, noting the position of the high lights in each.

Third.—Decide upon the relation of the building to the sky, whether darker or lighter. In Plate II. the mass of the building was to be darker than the sky, and a light wash (see roof) was passed over the entire building, the street, and the other buildings to right and left, leaving the white lights and some of the first value in the windows of the light side to suggest the play of light on the glass.

Plate II.

Some of the first light value was left upon the sidewalk to contrast with the shade and express sunshine. The steps also were left of the original value. It is well to let the shape of very small surfaces, especially when in light, be shown by the shape of shadows falling across them. (See Plates I. and V.)

Express form by shadows.

Keep the lights from the first.

Lights lost can never be regained; scratched paper or Chinese white will not give a true effect.

Great care should be exercised in bringing washes up to the bright lights, that the washes do not all stop at the same

place, giving the light the effect of a line of white painted on the building instead of the brightness of reflected light. If several washes are to be laid each can stop a little farther from the light and so give a graded effect. If a dark wash is to be brought up to a light, as sometimes happens even on light sides, a piece of blotting paper with straight edge can be placed on the paper, and enough color removed to give a proper gradation.

Fourth.—Put in the darkest spot. This will probably be a doorway or window. There should be one principal dark, and this should be as dark as sepia can make it.

Now, having the lightest place in the drawing represented by white paper and the darkest by a full tone of sepia, we can grade between these two extremes. Constantly refer to the white and dark, for, knowing that nothing can be lighter or darker, we must exercise care in laying the intermediate values.

The darkest spot.

The contrast of light and dark gives brilliancy, but it must be remembered that it is the masses of intermediate shade that give the effect of solidity and truth.

Importance of half lights.

Only the darkest spot is to be shown at this stage of the work. When the drawing is ready for the detail, this dark can be repeated in decreasing values as the edge of the drawing is reached. But do not have several very dark places, for a spotted drawing gives the effect of unrest. Let the dark values lead up to the dark spot, as the light ones do to the white.

Do not make a spotted drawing.

A light value cannot be washed over a dark without floating some of the dry pigment. It is therefore necessary to place this dark with care that it may not interfere with future washes.

In Plate II. the darkest spot was seen to be the doorway, and this was put in as shown; first, all the opening was covered with a dark value, then the space beyond was given

To get the full strength of sepia.

the effect of depth by allowing a pool of sepia, slightly thinned with the water, to dry out. In large areas, the board must be held perfectly horizontal that the pigment may settle evenly as the water evaporates. (See door in Plate I., and space in broken wall of monument in Plate VIII.)

The shade.

Fifth.—Express the mass of the building by laying over shades and shadows a value that will represent the average intensity of shade.

In Plate II. the value of the block of houses to the right was taken as that of the average intensity, and a value laid over all shades and shadows. The same value was also carried over the street.

A value was then prepared dark enough to give proper contrast with the light side, and, turning the board slightly, the wash was put on, beginning with the gable and extending over the first building beyond, covering both shade and shadow.

A graded value.

As this wash progressed a little clear water was added to the cup of pigment, from time to time, giving a graded value—dark near the light, and lighter as the wall recedes. A value about equal to the centre of the wall in shade was put over the circular projection and its shadow.

Upon the success of these values depends the success of the drawing.

Importance of masses of shade.

Too much stress cannot be laid upon the importance of realizing the masses of shade. If the student does not grasp the fact that objects are expressed by value and not by outline, that detail must be subordinated that the general effect may be true; he will not be successful.

Think of the last touch when the first is made.

These dark values must express not only shade, but much of the detail in shade. The play of light on glass must not be forgotten, and window casings, ornament, etc., can be expressed by leaving uncovered parts of the first washes. (See Plate I.)

Plate II. is not carried beyond this stage in order that the treatment of masses of shade may be better realized.

When the student first takes up this class of work he has difficulty in realizing the depth of value necessary to express shade and shadow ; almost invariably he makes them too light.

Sixth.—Increase the values where necessary. Let no two surfaces be of the same value. Beginning with the shade surface nearest the light, let the surfaces gradually grow lighter and simpler as they are more distant ; and on the light side let the surfaces grow darker. This will give an atmospheric effect. Variety.

It frequently happens, especially with students who have been drawing a " Plate of Orders," that the drawing, when it reaches this stage, has a very hard and crisp appearance, apparently representing a building of cardboard, and is without a trace of feeling of atmosphere. Lack of freedom.

This appearance is obviated by applying the washes with more freedom, and remedied by going over different surfaces, or parts of surfaces, with washes of almost imperceptible value, and by laying broken washes—irregularly over roof and walls—across from one surface to another, without any attempt to blend edges. This gives a play of light, and is always successful if not put on too dark. (See Plate I., where such touches were used to good advantage.) Broken values.

A transparent effect is obtained, when a dark wash is put over a light, by leaving small, irregular areas of the first wash to give life to the second. In this way material can often be expressed and the scintillations of the light suggested. (See Plate V. for example of this handling.)

Much of the freedom in the handling of Plate IV. is obtained by the irregularity of line, resulting from drawing with the brush. This is an excellent practice for those who understand rendering in water color, but should not be attempted until skill has been attained.

Most to be avoided is the drawing laboriously worked over, and rendered by a multitude of light washes, with edges washed and blotted into indistinctness. If a value is too dark or "muddy," it is sometimes necessary to sponge it off by wetting the paper, and lifting the color by repeated delicate touches of a soft sponge.

Avoid indistinctness.

The sponge.

But much of the irregularity of edge, especially in first washes, will not be noticed when the drawing is finished. While the first two or three washes are being handled, the paper can be wet as at first, allowing washes to flow evenly. If the edge is too hard, it can be reduced by drawing clean water over it to dissolve it, and then lifted by applying the blotter; but strive to lay washes without hard and irregular edges.

Hard edges.

It sometimes happens that the sepia does not dissolve, but settles upon the paper in visible particles. If this occurs in the sky or distant landscape, it should be sponged off at once, but it often gives a good texture to foregrounds or near stone work.

The shadows.

Seventh.—When all values, except cast shadows, are found to be of proper intensity, these should be washed in.

If it cannot be determined whether the shadows are dark enough, put photograph and drawing off at a great distance and compare the two; or hold them before a mirror; or compare them through a diminishing glass.

Use of diminishing glass.

Cast shadows should be put in perfectly flat, not worked over, and dark enough the first wash. Notice the shadow cast by the bridge in Plate III., by the porch in Plate V., by the invisible balcony in Plate VI., and by the cornice of the monument in Plate VIII.

Eighth.—Indicate the detail.

Students invariably make the mistake of putting in the details before the masses of shade have been brought up to the proper value.

Finishing.

All color, up to this point, should have been put on in flat washes; but the drawing is now far enough advanced to permit the grading of values here and there on roofs, etc., and of working up details to any degree of finish wished.

Rule for rendering detail.

A general rule to follow for the rendering of details is to omit all that can be omitted, and to express the remainder in the simplest possible manner; many of them can be expressed by flat washes.

Window-caps, belt courses, voussoirs of arched openings, the finish on wooden houses, etc., can be expressed by being made a little darker or lighter than the walls around them. (See Plate I.)

Detail seen in half lights.

Surfaces in shadow show little detail. This is also true of those exposed to bright light. Detail is most clearly seen in intermediate values.

Do not rely upon detail to give the effect. Dark lines and spots can never take the place of values.

Express the mouldings simply. Remember that the joints in the brick and stone work really show not at all compared with the important lines of the building; treat all carving simply, and let the detail of the window be very simply and broadly treated. (Study Plate V.)

Before any of the detail is indicated, the drawing should fully express the essential parts of the building, *i.e.*, its mass, outline and the effect of light upon it.

Detail not needed.

The drawing should now be in such a condition that if worked on no longer it would yet tell its story. If, however, the play of light on a window can be indicated, accents placed under the mouldings, very small shadows put in and details of carving brought out—if, in fact, the right touches can be put in the right places and in the right way, our drawing will be, not the work of a draughtsman, but the work of an artist.

Following out the above order of work, Plate II. would be completed as follows:

To finish Plate II.

Sixth.—If the detail was now rendered the building would have no substance, would not have the effect of reality. The different surfaces must express themselves, and the building must stand out from the sky and the distance as it does in nature.

A value should be put over the roof on the light side, and the conical roof should receive a value graded toward the light. The roof on the shade side should receive a tender value against the sky, but most of it should remain as at present to suggest the path of the light across the building. A broken value should pass over the light side, and the ventilators should receive attention, the values of the nearer being much the darker. The buildings in the distance should be treated like those in Plates VIII. and IX., and a stronger value given the street in the foreground.

Seventh.—The cast shadows should now be washed in. Begin with the narrow shadow of the building upon the end of the block of houses, bring this down, and draw the narrow shadow of them all across the sidewalk, letting the value grow lighter as it grows more distant. A pool of color, to act as accent, should be left to dry out where the shadow meets the nearest vertical corner of the building. (See shadow of monument, Plate VIII.)

Shadows must be transparent.

The shadow of the projection should be perfectly flat where it falls on the wall, but should grade into the shade to assist in expressing the cylindrical form. Always make the most of anything that will aid the perspective, either lineal or aerial.

Let the cast shadow of the edge-stone of the sidewalk be quite dark in the foreground, and of the same value as the cast shadow it runs into in the distance.

If possible, the drawing should now be put away for several hours. When it is again taken up, the eye, having

Rest the eyes.

Plate III

looked at other things, can better see if the values are of proper intensity.

Eighth.—With the exception of the windows very little detail is needed to give proper character to the building.

See the plates for method of rendering cornice, roof, etc.

The windows in this problem should be treated similarly to those in Plate I., the nearer drawn quite fully, then growing simpler as their distance increases until, in those at the end of the building, a wash expresses all.

It may not be possible, in all cases, to follow the order of the less important steps described above.

Exceptions to all rules.

No absolute rule can be given for rendering a building in washes of water color, for every drawing presents problems of its own.

Individuality.

The student will soon discover the methods of work that give him the power of obtaining true effects, and any method that enables him to obtain these effects quickly is legitimate.

Strive to handle the medium freely. Freedom of handling is not carelessness. If one is thoroughly acquainted with his subject he can talk freely—if one thoroughly understands his medium and knows what he wishes to do, he can draw freely.

Plate I. (original size of drawing, 16x24″) was rendered, from plans and elevations, to be reduced to size of 2x3¼″.

Work as if for reproduction.

The student is advised to always work as if for reproduction; for, since the work has to be done in a bold manner to get the necessary strength of contrast, he obtains a power and freedom not to be gained by working out fully finished drawings on a small scale.

Plate III.

The above described method was followed in rendering Plate III. (original size, 10x15½″).

Second.—A very light wash, same as sky, was passed over the entire surface with the exception of the high lights.

Third.—Still omitting the high lights, a wash, same as light side of near tower, was passed over the group of buildings and the street.

Fourth.—The darkest spot (door to right) was put in with full strength of sepia.

Fifth.—A value, same as roof of farther tower, was put over all dark surfaces at once.

Sixth.—The roof of nearer tower, its shade side, the low roof to right, and the near wall, including shade and shadow of bridge, received a value like light side of roof.

Next the near wall in shade received a graded value; the shade side of near tower was also graded; other small surfaces were given light values that they might take their places in the drawing, and tender broken values passed over light and semi-light surfaces.

Shade sometimes darker than shadow.

Seventh.—The shadow under the bridge was put on very wet and allowed to dry out darker in the shade, instead of shadow, in order to lift the bridge and make it stand at right angles to the wall.

Eighth.—The touches to render detail were handled so as to assist in expressing the position of the different parts of the group. Thus the stonework is fully rendered near the spectator, and barely suggested in the distance; the shaddows of the cornice of the near tower are much more distinct than those in the more distant one.

Never forget the distance of the object.

The student is advised to write out a description of the method of rendering Plate IV. (original size, 8x15″), following the order described above. This will help fix the matter in his mind, and should be done before attempting to work out Exercise I.

Plate IV.

Exercise I. should be repeated until the student gains power over his medium, and appreciates the meaning of masses of shade.

It is impossible to make a *fac-simile* wash drawing of a photograph, and it is not advisable to work from photo-

Plate IV

Plate V

graphs longer than to gain the experience mentioned above, for the student is likely to fall into narrow methods of thinking and working.

EXERCISE II.

FOR PRACTICE IN ORIGINATING SCALES OF VALUE.

We will go a step further toward our goal—the conception and rendering of a purely original scheme of light and shade—and select from any source—architectural publication, magazine or newspaper—some simple building that is a reproduction of a pen-rendered perspective.

Work from pen-rendered perspective.

This subject should be studied in the manner and order described when the photograph was taken, but more careful attention must be given the chiaroscuro.

It will be found that the shadows are necessarily very much alike in value, and that much is expressed in outline where no outline exists; therefore very careful consideration must be given to planning the washes that the light and shade may give the true effect. The order of work should be the same as for Exercise I.

Originality required.

As the student progresses, let less fully rendered subjects be taken, till the merest sketch will give him suggestions for a problem.

Plate V. (original size, 10x14″) was rendered from a small sketch in outline. The success of this drawing, particularly, depended upon the treatment of the large area in shade.

Plate V.

Observe the shadow upon the ground (students usually neglect to give the ground its proper value); the cast shadow of the porch (here is a case where the shadow is lighter than the shade with good effect); the ornamental frieze, very simple in the light and shade, but more fully expressed in the half-light; the simply-rendered chimney

Study this plate.

top; the windows expressed by one flat wash, over which are drawn a few suggestive touches.

EXERCISE III.

FOR PRACTICE IN RENDERING DETAIL.

The student should not confine himself to one class of subjects; having mastered the work suggested in the previous exercises, he is advised to select a photograph of some doorway, loggia or similar subject (see Plates VI. and VII.), for the practice of rendering detail, as stonework, carving, etc. Here, again, the object will not be to copy the photograph, but to gain that knowledge and manipulative skill necessary to express with a brush the character of stone simply cut or elaborately carved.

Detail, however, is always subordinate.

But remember that the picture is not made up of detail; that the same harmony and relation should exist between the various parts, and the same subordination of detail to general effect should be observed as in rendering an entire building.

Make large drawings.

Drawings of this class should be made as large as convenient.

Plate VI.

The main idea in rendering Plate VI. (original size, 18x22″) was to obtain the effect of bright sunlight without and deep shade within, with the sun high in the heavens bringing out strongly the details by their shadows.

In subjects of this class, the white paper should be reserved for the boldly projecting mouldings in the light, the reflection of light in glass, and the glint of light on marble columns.

Rough stonework.

Rough stonework in shade or shadow should receive little handling. In light, the whole surface should receive a flat value of proper intensity to express its local color. With a very light value next draw lines of separation be-

Plate VI

From Photo~ H.E. Hewitt~ Feb. '91.

Plate VII

tween the stones. Wash a slightly stronger value on each stone separately for the half-lights, shades, and shadows, occasionally blending into the light.

If the edges are very abruptly cut (see voussoirs of arch in Plate VI.) the shadows are drawn as any cast shadows; but if the edges are not so cut and the surface is irregular, catching the light here and there and casting shadows now sharp, now diffused, it is well to handle the deep shades and shadows with a dry brush (a brush in which there is little color), with a value not washed on but stippled. (Compare upper left with upper right corner of Plate VI.)

Only use for a dry brush.

Ornament should be carried on from the first; its shades and shadows treated as parts of the other shades and shadows, and as other detail.

Ornament.

Ornament must be understood to be properly expressed, and every architectural draughtsman should render full size capitals, etc., from nature or from cast, in order that he may understandingly suggest ornament on the small scale necessary in a perspective. (See top of monument and mutilated capitals, Plate VIII., capitals in Plate IX. and ornament in border of title page.)

Render detail full size.

In Plate VII. (original size, 15x20″) the effect intended was that of brilliant sunshine casting pronounced shadows, with the shade appearing rather indistinct in contrast.

Plate VII.

The large area of light in the foreground was, therefore, left almost white and the near shadows kept flat, that the eye might not be led away from the cluster of shafts and carved capitals that form the centre of interest.

The shadows cast across the floor fall at the proper angle for good composition. If they made greater angles, were parallel to the spectator, or were cast toward him, they would cut the picture into parts and destroy the present feeling of unity.

Avoid horizontal lines.

EXERCISE IV.

FOR PRACTICE IN SIMPLIFICATION.

Heretofore we have confined ourselves to rendering simple subjects, buildings where the effects were very readily seen and represented.

The student has found that the most difficult part of the problems has been the simplification necessary.

A means to an end.

It is not probable that the architect, in practical work, would have occasion to render a subject in the line of those reproduced in Plates VIII., IX. and X.; but the practice in simplifying infinite detail, in giving the work the character of the original, makes this exercise most valuable.

If the foregoing notes have been understood, the fact will be readily appreciated that the rendering of an historic monument of architecture contains all the problems found in the previous exercises, and many more that cannot be met by verbal rule.

The student is advised to render as many subjects of this description as time allows, making carefully finished drawings to large scale.

Plate VIII.

In handling a subject like Plate VIII. (original size, 18x25″), where the values are nearly uniform throughout, great care must be exercised in rendering detail. For, there being no pronounced contrasting masses of light and shade, the dark spots may cut up the drawing, producing a feeling of unrest.

Compare with photograph.

This drawing should be compared with a photograph of the monument to better realize the problem that confronted the draughtsman. Notice how surfaces, cut by countless lights and shadows, are here rendered in a wash that, though the greater part are omitted, still gives what is most important—the character.

Notice the ruined base, a few irregular washes here express it; the crowning ornament, three washes express it;

Plate VIII

Plate IX

Fischer

Plate X

the mass of houses to the right, four washes with one darker spot express it. And further notice, as an illustration of one of the first principles stated, that this rendering accentuates the essential and characteristic features by making detail subordinate.

Plate IX. (original size, 17x21″) illustrates the truth of the statement that accessories simply treated act as a foil and enhance the beauty of the principal object. Plate IX.

The first light wash represents the sky. A flat wash, over which is graded one slightly stronger, represents the foreground, and the distance is treated in flat washes. Notice the simplicity of the shadows upon the shafts. It is an easy matter to draw crooked lines with a brush, but quite another thing to draw irregular lines that express character. Example of simple handling.

The old Japanese artist was master of line; his simplest brush mark could express rest or motion. Fleecy clouds in the summer sky and storm-driven waves on a rocky coast were expressed by the same number of lines, but the character of the lines expresses these two extremes. Character of line.

The student who studies character expresses it. Haphazard touches of the brush never mean anything.

"Artistic touches" are the final accents to preconceived schemes of expression, added to give life to the drawing as the breath gives life to the body. Artistic touches.

The handling of these columns well expresses their material, age and condition.

Plate X. (original size, 8x11″) clearly shows that effects do not depend upon the expression of detail. Students have a tendency to exaggerate. New buildings are given the crisp, mechanical appearance of a problem in descriptive geometry, and old ones have their ruinous condition so exaggerated that ruin alone is thought of when viewing the picture. Plate X. Students exaggerate.

As the student works through these exercises, he finds that his power over the medium rapidly increases. If he should now attempt to render a problem like Plate II., much less time and fewer washes would be required.

The accessories.

Heretofore little has been made of the accessories; subjects have been selected that required but little attention outside of the building itself. Attention must now be given to this matter.

"Artists are born, not made."

No instruction from books could ever enable a student to interpret nature. If, having learned the method of handling water color, he can appreciate the effects of sunshine and shadow in nature, and has a feeling for the effects of masses of foliage relieved against other masses or against the sky, he does not need to read a book to learn to paint a landscape.

However, few of us are artists. But, in our practice, it is almost always necessary to place trees, etc., about our buildings, and to give variety to our skies by cloud forms.

Association.

With our lack of study of character, we are accustomed to associate certain shapes, values and positions with certain things. A shape that in the sky we would recognize as a cloud, as easily passes for a stone if seen in the foreground. A tree in the distance, represented by a light flat wash, can, by simply increasing the value, be made to appear near. A horizontal reach of land becomes a lake by drawing in the reflections of surrounding objects. The architectural artist takes advantage of this.

Take advantage of everything.

He wishes to keep the accessories simple that attention may be directed to his building, and he, therefore, expresses these accessories in flat washes.

A method of rendering accessories.

Plate XI. illustrates this method of rendering the accessories of a building by the use of flat washes of color. In this work all things are expressed by flat values, leaving all edges sharp and with no blending or grading. Effects are obtained by the shapes of the values.

Plate XI

Plate XII

Fig. 1 is rendered in three washes. The first over everything except the white clouds and the light surfaces on the house. The second is a value for shade side of house and for trees. The third gives the cast shadows. Plate XI.

Fig. 2 is the work of four flat washes. The area covered by each wash can be seen. Fig. 3 is rendered by five washes and Fig. 4 by six.

It will be well to copy Figs. 3 and 4 of this plate before working through many of the exercises, and then, having finished them, return to this problem, and, with two or three graded values, render it with the power gained by additional knowledge and skill.

To obtain the best results, the student should now work directly from nature; if this is impossible, it will be well to render subjects made up largely of landscape or sea views, suggestions for which can be found everywhere. (See Plate XII. These cottages were rendered from small pen-sketches found in a catalogue of architectural publications.) Plate XII.

The aim of the student should be not only to produce a true and beautiful picture, but to produce it quickly. He should endeavor, for obvious reasons, to take advantage of everything that will aid him in obtaining effects in the shortest possible length of time. Obtain effects quickly.

EXERCISE. V.

FOR PRACTICE IN RAPID SKETCHING.

A good exercise to cultivate the power of quickly deciding what is to be done and the best way to do it, is the time sketch. In this the student limits himself to a certain period, and in that time attempts to do a certain amount of work. For example: Sketch a picturesque sea-side cottage in ninety minutes. Sketch a clock tower for town hall in sixty minutes. Sketch a gateway for city park in two hours. The time sketch.

"Time is money."

The ability to put thoughts upon paper quickly and beautifully expressed is of the greatest advantage to the architect, not only from an artistic but from a financial point of view.

Plate XIII.

Plate XIII. is a time sketch rendered in ninety minutes, and the two sketches on Plate XII., by washing in the large values while the paper was wet and the finishing values of one while the other dried, was rendered in but little more time.

Keep several drawings going at once.

If these notes are being worked through systematically, as by a class of architectural students, it will be well to set aside one day per week for a time sketch. It will add to the interest if some competent person assigns the problems, and, at the end of the time, criticizes the drawings.

Competition sketches.

This work will prepare the student for sketching from nature.

Skill comes only with practice.

To attain skill, sketch constantly; no building is so small or simple as not to present a good problem.

When sketching from nature, do not be confused by the light and the apparent importance of detail, but look only for large masses of light, shade and shadow.

Art must always fall far short of nature, for white paper can never rival sunlight, or the pigments of the palette do more than suggest nature's coloring.

In our work of rendering architectural subjects in sepia, we select what will add most to our buildings, and, since we cannot express everything, make as little as possible of all that does not add directly to the effect of solidity and sunlight.

Plate XIII

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